BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

As rescanning documents *will not* correct images, please do not report the images to the Image Problem Mailbox.

FORMABLE HAT BRIM

Sat Spec
#6 n.E.
6-11-3

FIELD OF THE INVENTION

The present invention relates generally to the method of hat construction and the method for using said in a hat brim or bill capable of being reformed repeatedly.

BACKGROUND OF THE INVENTION

The manufacturing and design industry is always on the lookout for fabrics, fillers and reinforcements to be used in a variety of applications. The hat manufacturing and design industry is one such industry. Hats are made from an unlimited number of different types of fabrics used as cover materials, and in many different shapes to suit the wearer's aesthetic sensibilities. Hats are also worn as a head covering to protect the wearer's head, face and eyes against the elements such as sun, wind, rain, etc.

Hats are typically comprised of a shaped crown and a brim or bill at a lower edge of the crown and projecting there from. A bill is the projecting front brim of a cap or visor. The visor may not include the shaped crown but rather just a headpiece for attachment to the projecting front brim. The projecting front brim may be crescent-shaped assuming a generally convex or rounded curvature. A brim is the projecting front, sides and back of a derby, cowboy hat, or the like. The term "hat" as used herein includes conventional dress hats, cowboy hats, as well as caps, visors and the term "crown" as used herein includes the visor headpiece.

The projecting brim or bill is typically constructed of at least one top and bottom layer of cover material, which may be of the same or different as the crown. The cover material may be selected from a variety of aesthetically appealing materials such as felts, textile fabrics, canvas, straw, leather and synthetic or the like. The at least one top and bottom layers are usually visible. A middle layer includes an inner reinforcement member to impart stiffness to the projecting brim to maintain the brim in its general projecting condition or shape. Conventionally, the projecting brim has been stiffened by the inner reinforcing member either inserted into a pocket in the at least one top and

bottom layers or by a non-malleable stiffening wire at an outer edge of the brim. The inner reinforcing member has conventionally been made of cardboard, sheet metal, sheet cork, foam or other plastic-type materials such as high-density polyethylene (HDPE), with and without stiffening impregnate. In addition numerous prior art hats incorporate GORETEX® or similar waterproof and breathable materials into the insert pocket, or between the inner lining and outer cover.

The wearer may desire changing the shape of form of the brim for increased protection against the elements or simply for aesthetic reasons. For example, folding the brim upward is a common practice. Similarly, changing the shape or form of the brim or bill is usually desired following the inevitable deformation caused by washing the hat. Similarly, the brim may have to be folded or furled to conveniently carry it in the wearer's pocket, purse, etc. and then unfolded or unfurled to wear. Unfortunately, such brim reformation has not been easily permitted by the conventional inner reinforcing members and has often resulted in permanent distortion of the brim. The hats are often discarded following such attempts at reformation.

There is therefore a need for a novel material that is capable of continuous change of shape in more than one direction without braking apart. There is also the need for a novel material that is particularly adapted to make a hat brim that is capable of retaining its shape after reformation, and of being reformed repeatedly into new shapes without substantial distortion or breaking the brim structure. There is still further need for a material that may be used for a hat brim that is substantially stiff yet pliable enough to facilitate folding, or furling, but when unfolded or unfurled, the brim is capable of resuming its shape without bearing indications that it has been recently folded or furled. There is a still additional need for such a material that can easily be incorporated into the traditional art of clothing and hat construction and fabrication including the ability to be sewn. There is a further additional need for a material that is substantially washable. The present invention fulfills these needs and provides other related advantages.

SUMMARY OF THE INVENTION

The present invention resides in an improved method for using the same to make a hat brim that may be reformed repeatedly. The reinforcing member for the hat brim comprises a plurality of malleable wires as a wire frame member defining the shape of the brim. The plurality of wires in a spaced apart relationship is utilized in conjunction with existing hat manufacturing processes, and materials, and encapsulated into the hat brim with the same. Each of the plurality of wires follows the contours of the brim from an outer edge of the brim to an inner edge of the brim where the brim is connected to a lower edge of the crown or visor. The outermost wire may define the outer edge of the brim.

The wire is generally commercially available in a wide variety of metals and alloys including brass, copper, Monel®(nickel copper) nickel, and plain, galvanized, and stainless steel or the like. Metal and alloys useful in the wire of this invention are substantially malleable, substantially ductile and provide structural plasticity to the wire members utilized in the inner stiffening member.

A method of making a hat brim capable or repeated shaping and reformation is provided, comprising the steps of providing at least one wire frame member; making the wire frame member into a reinforcing member in the shape of the brim; and incorporating the reinforcing member into the brim of the hat. The reinforcing member may be utilized in conjunction with middle reinforcement layers described above, in the conventional manner and commonly used in the manufacturing of hats, or by itself as the only middle reinforcement layer.

Other features and advantages of the present invention will become apparent from the following more detailed description, taken in conjunction with the accompanying drawings which illustrate, by way of example, the principles of the invention.

BRIEF DECRIPTION OF THE DRAWINGS

The accompanying drawings illustrate the invention. In such drawings:

FIG. 1 is a perspective view of a hat in the shape of a conventional dress hat with a crown 12 and the brim 10 attached to the lower edge 9 thereof, illustrating a portion of the top cover material 16 of the brim 10 removed to reveal a portion of a reinforcing

member of the embodiment made from a plurality of wires 7 in a frame shaped to the contours of the brim 10 and disposed therein; and the hat insert 11 comprised of materials common to the art of hat making, located between the top covering 16, and bottom covering 17 fabricated from materials common to the hat making industry.

FIG. 2 is a exploded sectional view of a finished hat showing according to the present invention showing the plurality of wires 7 which may be stitched 15 in-place with a hat insert 11 of materials common to the art of hat making between the top covering 16 and the bottom covering 17 of the brim 10; and a sweat band 13 and lining 14 from materials commonly utilized in the art of hat making.

FIG. 3 is a perspective view of a hat in the shape of a cap with a crown 12 and the brim 10 attached to the lower edge 9 thereof, illustrating a portion of the top cover material 16 of the brim 10 removed to reveal a portion of a reinforcing member of the embodiment made from a plurality of wires 7 in a frame shaped to define the shape of the brim and disposed therein; and the hat insert 11 comprised of conventional materials utilized in the hat industry.

FIG. 4 is a top plan view of the reinforcing member of FIG.3.

FIG. 5 is an exploded sectional view demonstrating a typical hat brim 10 with a plurality of wires 7 located above the insert 11; and below the top covering 16; which may be stitched in-place 15 through the top covering 16, insert 11, and bottom covering 17.

FIG. 6 is an exploded sectional view demonstrating a typical hat brim 10 with a plurality of wires 7 located in the body of the insert 11 comprised of materials commonly used in the art of hat making; and between the top covering 16 and bottom covering 17; which may be stitched in-place 15 through the top covering 16, insert 11, and bottom covering 17.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

As shown in the drawings for purposes of illustration, the present invention is concerned with an improved hat brim. In an embodiment as shown in FIG. 1 and FIG. 3,

a plurality of wires 7 are made into a reinforcing member FIG. 4 defining the shape of the brim 10. Each of the plurality of wires 7 follow contours of the brim 10 from an outer edge 18 of the brim to an inner edge 9 of the brim where the brim is conventionally connected to a lower edge 9 of the crown 12. The outermost wire 7a may be welded 8 or soldered to each of the plurality of wires at an intersection 19 by a weld (not shown). The welds assist in keeping the wires in the arched condition, and substantially uniform and distortion free. The plurality of wires 7 may be spaced apart from each other at substantially regular intervals from between about 1/8 inches to about one inch, preferably 3/8 inches apart.

A method is provided of making a hat brim 10 capable of repeated reshaping and reformation, comprising the steps of providing at least one wire frame member 7 as shown in FIG.4-5-6, utilized with an insert 11 fabricated from materials commonly used in the art of hat making, or alone with only the plurality of wires 7 encapsulated between the top covering 16 and bottom covering 17. The finished brim 10 is incorporated into the hat in the conventional manner.

CLAIMS

WE CLAIM

1. A method of making a hat brim capable of repeated reshaping and reformation, comprising of the steps of: providing at least one wire frame member and incorporating the reinforcing membrane into the brim of a hat.
2. The method of Claim 1, wherein the at least one wire frame member comprises at least a single wire or plurality of to the wire members utilized in the inner stiffening member, arranged in a pattern following contour lines of the brim.
3. The method of Claim 1, wherein the reinforcing member may be covered by at least one cover material.
4. The method of Claim 1, wherein the reinforcing member may be covered by at least one cover material on either of the top or bottom surfaces of the reinforcing member.

ABSRACT OF THE INVENTION

A plurality of wires forming a frame shaped like the brim of a hat. The wire frame member may be made from wires of substantially malleable, substantially ductile, metal

providing structural plasticity such as Monel®. The wire frame is incorporated into a hat brim to enable its repeated reshaping and reformation.